

PRELIMINARY ISSUE

Page 1

Work Order ID 63818

November 15, 2010 8:29:09 AM

Item ID: D4292-1

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Fitting

Start Date: 11/15/10 Start Qty: 4.00



Required Date: 11/18/10 Req'd Qty: 4.00



Reference:

Approvals:

Process Plan:

U

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D4292

PA1 P03

100



BAND SAW

Bandsaw

Memo

Cut Blank tO 6.250"
Batch: *114153*

110



HAAS CNC VERTICAL MACHINING #1

HAAS 1

HAAS CNC vertical machine #1

Memo

1-Machine per folio FB002
DWG REV: *PA3*
FOLIO REV: *AA*

2- deburr rough edges

0.00

0.00

0.00

0.00

ark 10/11/16

4 0

MATERIAL CERTIFICATION
REQD UPON DELIVERY
MFR 10-12-03

ark 10/11/17

4 0

Work Order ID 63818



Page 2

November 15, 2010 8:29:10 AM

Item ID: D4292-1

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Fitting

Start Date: 11/15/10 Start Qty: 4.00



Cust Item ID:

Required Date: 11/18/10 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

0.00

ark 10/11/12

4 - 0

130



QC

Quality Control

QC8- Inspect parts - second check

0.00 - inspects to Pn 3

by only

Status (x4)

140



HandFinish

Chemical Conversion Coat per QSI005 4.1

0.00

0.00

H BL B-11-18

Hand Finishing

Work Order ID 63818

November 15, 2010 8:29:11 AM



Page 3

Item ID: D4292-1

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Fitting

Start Date: 11/15/10 Start Qty: 4.00



Cust Item ID:

Required Date: 11/18/10 Req'd Qty: 4.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
Description

145



Powdercoat

Powder Coating

Set Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150



QC

Quality Control

Memo START: 11:20
OUT: 320°
FINISH: 11:50

Batch Part: M 115291.

QC3- Inspect Part Finish

0.00

→ M

10 (11/18)

N BL 10-11-08.

180



Packaging

Packaging

Identify as per dwg & Stock Location: _____

0.00

Memo

0.00

C

Work Order ID 63818

November 15, 2010 8:29:11 AM



Page 4

Item ID: D4292-1

Accept



Setup Start



Revision ID: PRELIM

Stop



Item Name: Fitting

Start Date: 11/15/10 Start Qty: 4.00



Cust Item ID:

Required Date: 11/18/10 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

190



QC

Quality Control

QC21- Final Inspection - Work Order Release

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Memo

0.00

*11 Rev Pass test only 10.11.18
Rev. A 11.*

POSITIVE RECALL

EFFECTIVE 10-11-18 AUTH LL

RELEASED DATE

Picklist Print

November 15, 2010 8:29:08 AM

Page 1

Work Order ID: 63818



Parent Item: D4292-1



Parent Item Name: Fitting

Start Date: 11/15/10

Required Date: 11/18/10

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A NEW ISSUE 10-11-14 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T73B4.000x4.00 0		Purchased	No			100	f	0.0000	0.52	2.189474			

M7075T73B4.000x4.00
0



7075-T73 Bar 4.0 x 4.0



Batch # M 116 153 = 2.1895" *on 10/11/10*

L Lacelle

From: Jean-Luc Menard [jmenard@dartaero.com]
Sent: November 14, 2010 3:18 PM
To: L Lacelle
Cc: Mike Petsche; jhurtado@dartaero.com; Chris Provencal; David Duval
Subject: D4292-1 FITTING

Linda,
Program/Route/Bom done.
You will have to issue the w/o as a bottom up costing is required.
JLM

Jean-Luc Menard
Production Engineering Coordinator



1270 Aberdeen Street
Hawkesbury Ontario
Canada K6A 1K7
Tel: (613) 632-5200 Ext 227
jmenard@dartaero.com

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DART AEROSPACE LTD	Work Order:	63818
Description: FITTING	Part Number:	D4292-1
Inspection Dwg: D4292 Rev: PA3		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.250	$\pm .030$	.243	—		Vern	ML-7
R.063	$\pm .010$	R.063	—		Rad-gage	REF
.125	$\pm .030$	.117	—		Vern	ML-7
2.95	$\pm .030$	2.940	—		"	"
.275	$\pm .010$	.276	—		"	"
.780	$\pm .030$	.774	—		"	"
.81	$\pm .030$	.805	—		"	"
.375	$\pm .010$	.375	—		"	"
.31	$\pm .030$	.310	—		"	"
.88	$\pm .030$	.871	—		"	"
.663	$\pm .010$	.661	—		"	"
Ø.381	$\pm .000$ $\pm .001$	Ø.381	—		"	"
3.44	$\pm .030$	3.447	—		"	"
2.450	$\pm .010$	2.449	—		"	"
1.325	$\pm .010$	1.330	—		"	"
.300	$\pm .010$	.303	—		"	"
.493	$\pm .010$	.498	—		"	"
4.875	$\pm .010$	4.873	—		"	"
R.25	$\pm .030$	R.250	—		Rad-gage	REF
1.75	$\pm .030$	1.754	—		Vern	ML-7
Ø.323	$\pm .006$ $\pm .001$	Ø.327	—		"	"
Ø.272	$\pm .006$ $\pm .001$	Ø.276	—		"	"
4.93	$\pm .030$					

Measured by:	<u>Amf</u>	Audited by:	<u>S</u>	Preliminary Approval:	
Date:	10/14/17	Date:	10/11/18		Date:
Rev	Date	Change		Revised by	Approved

10/06/15

DART AEROSPACE LTD	Work Order:	63818
Description: FITTING	Part Number:	D4292-1
Inspection Dwg: D4292 Rev: P43		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Measured by:	<u>Amf</u>	Audited by:	<u>S</u>	Preliminary Approval:	<u>—</u>
Date:	<u>10/16/17</u>	Date:	<u>10/16/18</u>	Date:	<u>—</u>

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10. Oct. 15

D

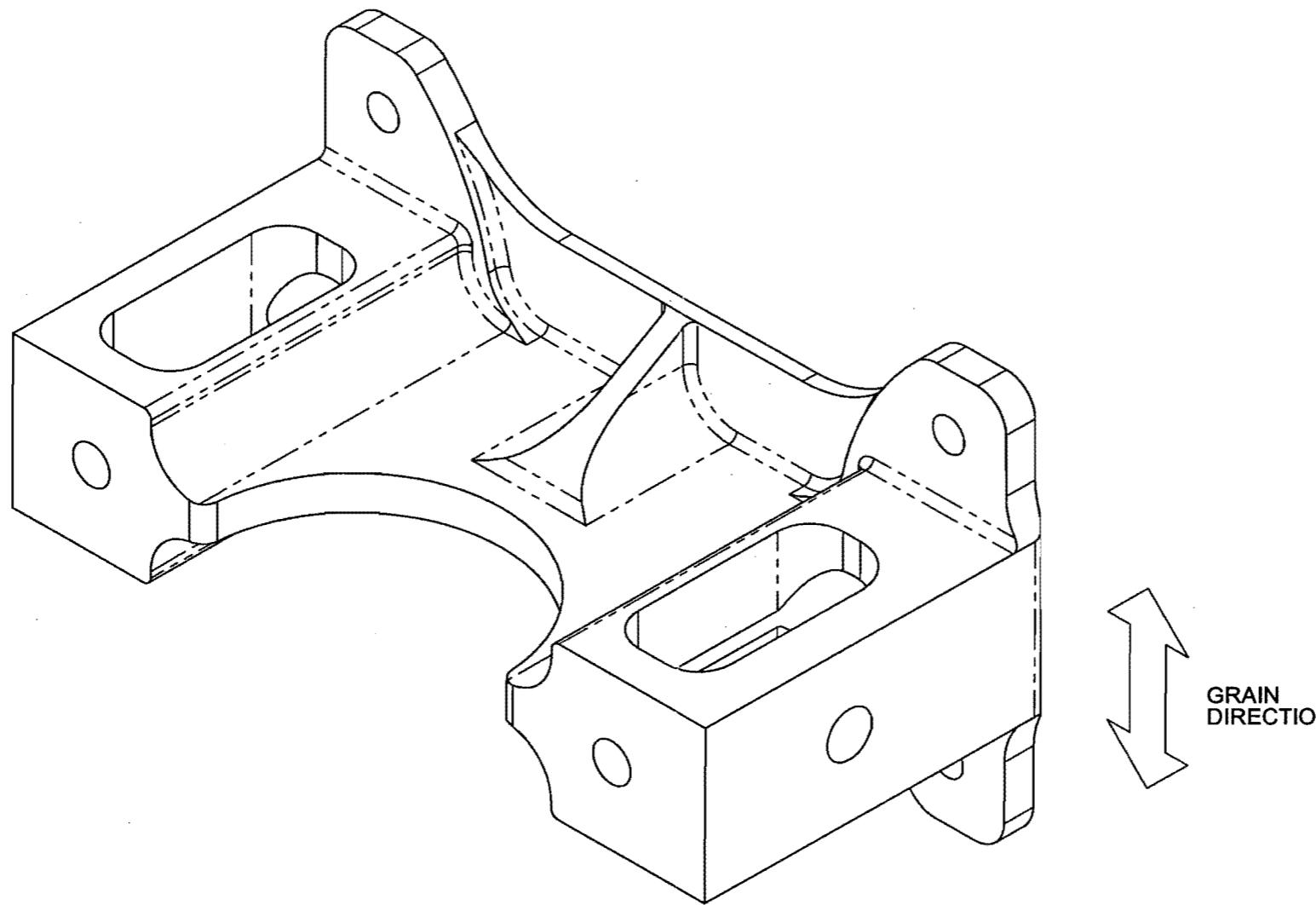
D

C

C

B

B



D4292-1 FITTING

NOTES:

- 1) MATERIAL: 7075-T73/T7351/T73510/T73511 BAR
PER AMS-QQ-A-200/11 OR AMS-QQ-A-225/9 (AMS 4124) OR AMS-QQ-A-250/12 (AMS 4078)
REF DART SPEC. M7075T73B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: P/N "D4292-1" AND B/N PER DART QSI 044 6.1
- 7) WEIGHT: 1.03 lbs

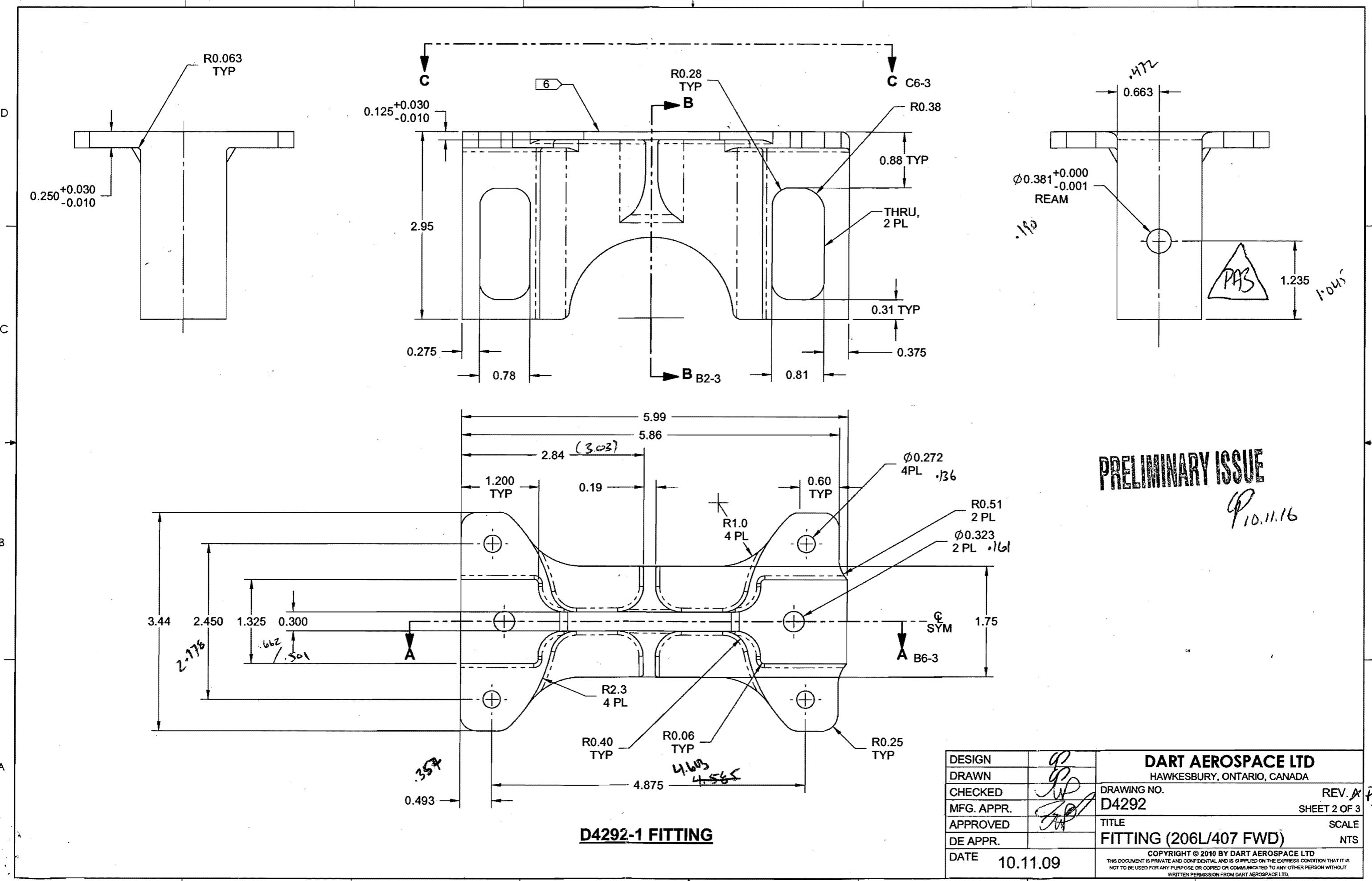
PRELIMINARY ISSUE

Rev. PA3

CP 10.11.16

GRAIN
DIRECTION

PA3	HOLE MOVED DOWN 0.060	CP	10.11.16
A	NEW ISSUE	CP	10.11.09
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	CB		
CHECKED	MB	DRAWING NO.	REV. A
MFG. APPR.	ZB	D4292	PA3
APPROVED	TM	SCALE	NTS
DE APPR.		FITTING (206L/407 FWD)	
DATE	10.11.09	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

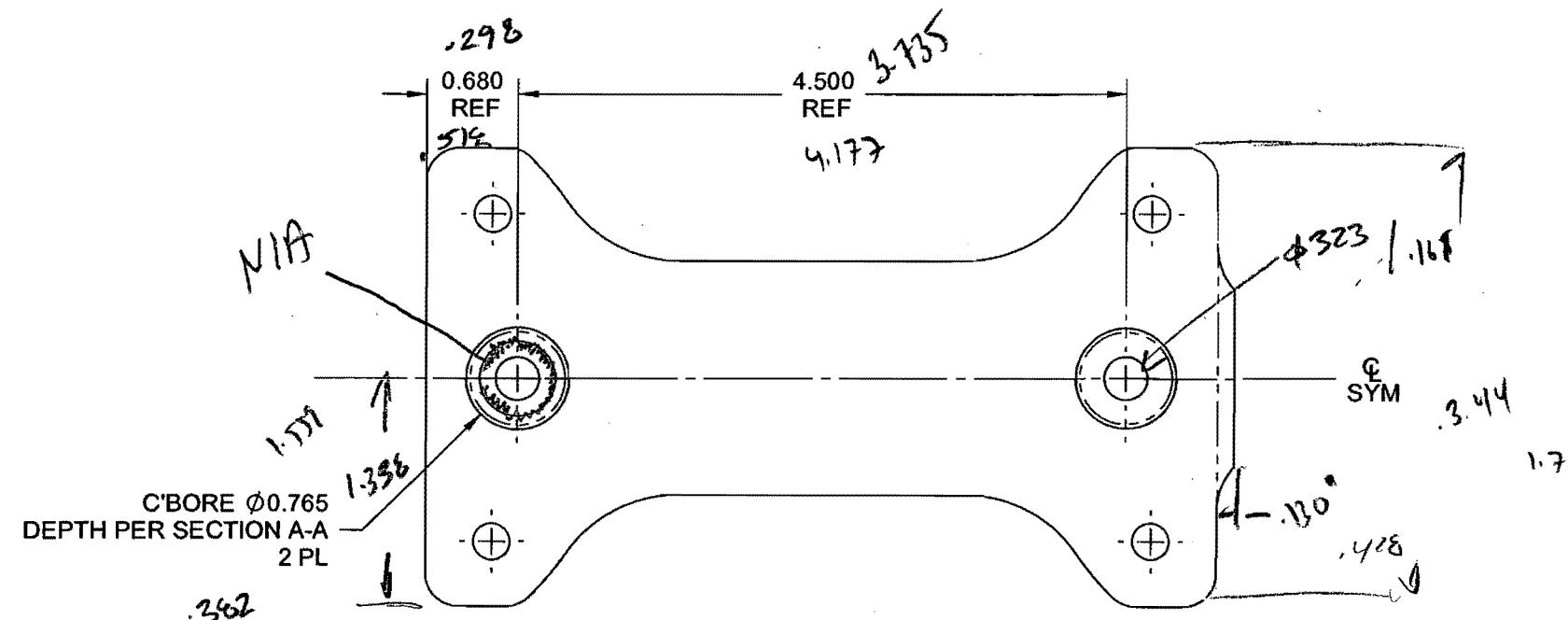


PRELIMINARY ISSUE

9
10.11.16

DESIGN	<i>GP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>GP</i>		
CHECKED	<i>JW</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>JW</i>	D4292	SHEET 2 OF 3
APPROVED	<i>JW</i>	TITLE	SCALE
DE APPR.		FITTING (206L/407 FWD)	
DATE	10.11.09	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
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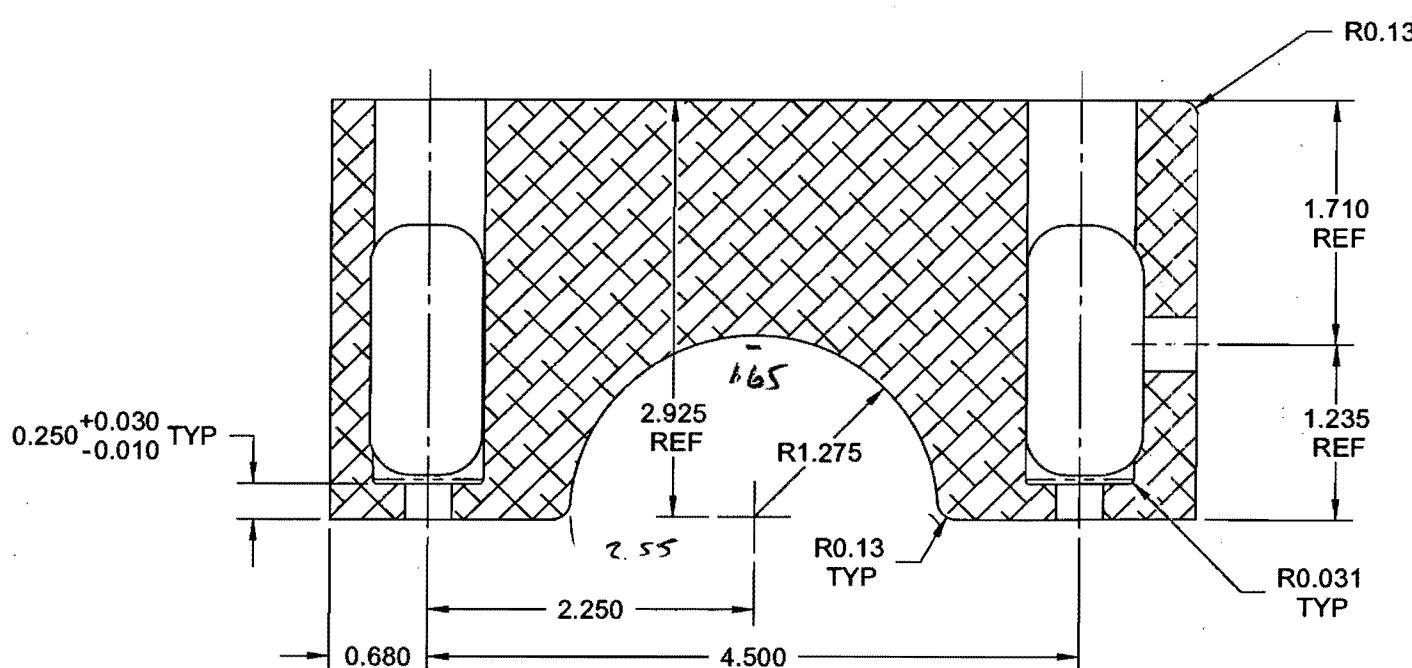
8 7 6 5 4 3 2 1



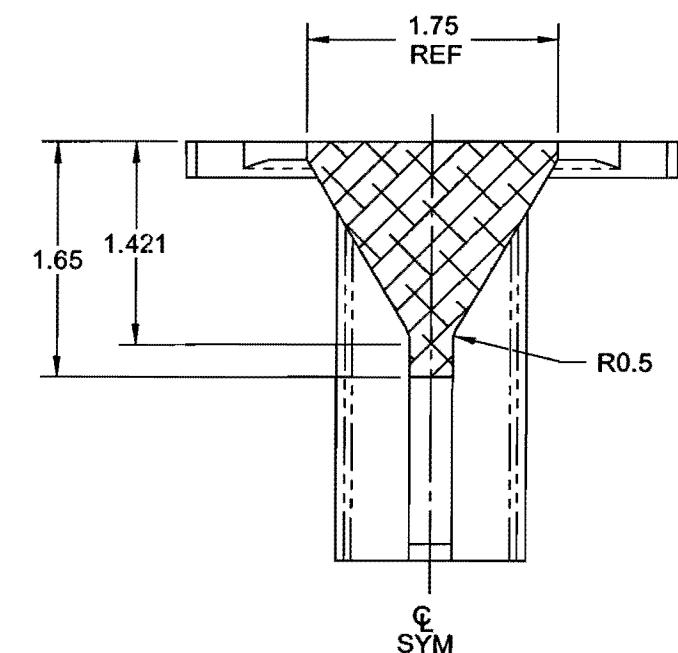
PRELIMINARY ISSUE

9/10.11.16

VIEW C-C D3-2



SECTION A-A A3-2



SECTION B-B C4-2

DESIGN	<i>g</i>	DART AEROSPACE LTD	
DRAWN	<i>g</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>M</i>	DRAWING NO.	
MFG. APPR.	<i>g</i>	D4292	
APPROVED	<i>M</i>	REV. A	
DE APPR.		SHEET 3 OF 3	
DATE	10.11.09	TITLE	
		FITTING (206L/407 FWD)	
		SCALE	
		NTS	
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Receiving Report

Date: 10/11/16 Batch No: 1116103
 Supplier: FortuneAlloy Dart P/O: 12898
 Packing Slip: Yes No Release Note Attached: Yes No N/A
 Invoice: Yes No Waybill Attached: Yes No
 Receipt: Cash Cr Shipment Complete: Yes No N/A
 QC6 Inspection: OK 10/11/16 N/A
 Work Order: N/A

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) Level 12 CR

Production/Admin:

Date 10/11/16

Received/Costing

Initial G

Location



FUTURE ALLOYS, INC.

20151 Bahama Street, Chatsworth, CA 91311 • 818-701-1144 • FAX 818-701-6182

INVOICE NO. 35470

Sold to:

Dart Aerospace
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7 CANADA

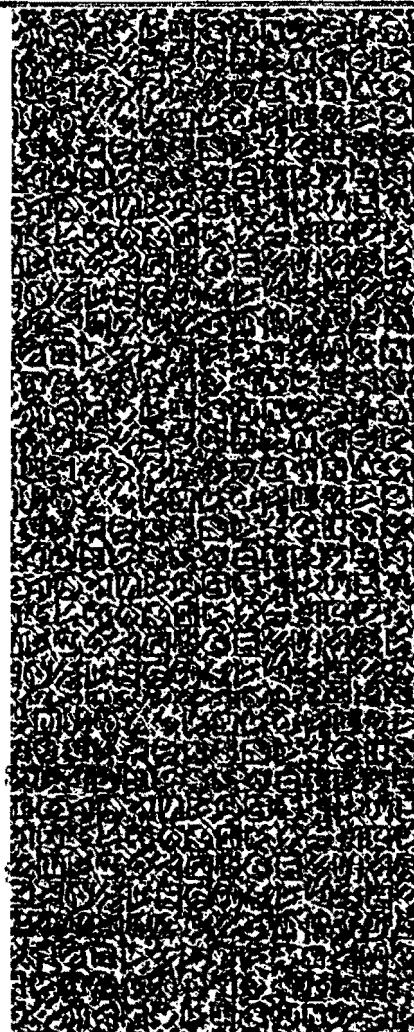
1 OF 3 - CERTS INCLUDED

DATE	TERMS	SHIP VIA	P. O. NO.	OUR ORDER #
11/11/2010	Check in Advance	FedEx	12899	7322
QUANTITY	DESCRIPTION	LBG	UNIT PRICE	AMOUNT

9.5 feet 7075 T7351 Plate 4.750" x 38.250" x 4.000" gr. - 3 pcs.
Reynolds Lot #980T113A

NOTES

Website: www.futurealloys.net
Subject to the terms and conditions on the reverse side.



THANK YOU

SHIPPER

REYNOLDS METALS COMPANY

EXECUTIVE OFFICES, Richmond, Virginia 23261

Certificate of Inspection and Test Results

YOUR ORDER NUMBER		SHIPPING POINT REYNOLDS NUMBER	DATE TALLY NO. AND OR BILL OF LADING NO. CERTIFICATE NO.	PAGE 1 OF	
REYNOLDS NUMBER 37F6451	PRODUCT NO. 21385	REYNOLDS CODES M 0329001018-21 P 7 003 800	3/31/98 0311354	C263294	
			CASES 2	GR. WEIGHT 7000	NET WEIGHT 6690
			QUANTITY 2		
NAME AS SOLD TO UNLESS OTHERWISE INDICATED					

EM NO.	PRODUCT NO.	DESCRIPTION
8 10179176 7070-17351 PLATE MILL FINISH 4.700" X 48.000" X 144.000" STENCILLED-INTERLEAVED. 5 FENCE PER GG-A-250/12 ULTRASONIC INSPECTED TO CLASS A ONE SIDE BY LONGITUDINAL METHOD PER GG-A-250/12F NOTICE 1 ULTRASONIC INSPECTED PER MIL-STD-2154, PS-21211, AND SAE J439-H DTD 02-11-87, PSD 6-18 DTD 03-03-93, PSD 6-17 DTD 1-24-94, PSD 6-16 DTD 10-20-93, PSD 6-15 DTD 02-11-93, PSD 6-11 DTD 10-06-88, PSD 6-10 DTD 9-22-87, PSD 2-4 DTD 03-26-92, PSD 1-1 DTD 6-10-91, PSD L-3 DTD 01-16-91, PSD L-4 DTD 6-3-90, PSD L-2 DTD 4-19-89 & PSD L-2 DTD 4-19-89 EXCEPT WITH PSD 2-4 REFERENCED SPEC MSFC 1249 IS ACCEPTABLE AS APPLICABLE TO LONGITUDINAL ULTRASONIC INSPECTION AND EDDY CURRENT INSPECTION ONLY CONDUCTIVITY INSPECTION TO BE PER ASTM E1004, & CONDUCTIVITY STANDARDS DO NOT HAVE SIMULATED OPEN SURFACE CRACKS, AND EXCEPT WITH PSD 6-13 PEAK VOLTAGE VARIATION OF +/- 10% LIFETIME MAY EXCEED RNC EQUIPMENT CAPABILITY.	98/04/04 9807113A	1B-10 10/11/98

(CONTINUED ON NEXT PAGE)

This document certifies that the material described above has been inspected and tested in accordance with (i) Seller's standard sampling and testing procedures or (ii) the requirements of any specifications of the material described above. The chemical composition limits and the applicable mechanical property test results of samples representative of the material are set forth above in any attachments hereto. Samples of the material have been found to meet the specifications described above. Inspection and test records are maintained on file.

This certificate shall be subject to the general terms and conditions on the reverse side of Seller's Acknowledgment and Sales Order.

Wallace '98
SIGNED FOR REYNOLDS
METALS COMPANY



REYNOLDS METALS COMPANY

EXECUTIVE OFFICES, Richmond, Virginia 23261

Certificate of Inspection and Test Results

YOUR ORDER NUMBER		SHIPPING POINT	DATE	PAGE 2 OF	
REYNOLDS NUMBER	ITEM NUMBER	REYNOLDS COOKS	3/31/98	TALLY NO. ANGON BILL OF LADING NO.	CERTIFICATE NO.
S7F3461	21589	M 0729001016 21 F 9 003 809	0311359		C263294
ITEM NO.	PRODUCT NO.	DESCRIPTION	CASES	GR. WEIGHT	NET WEIGHT
		NAME AS SOLD TO UNLESS OTHERWISE INDICATED	2	7060	6690
			SHIPS	QUANTITY	2
			TO		

ITEM NO. PRODUCT NO. DESCRIPTION

(CONTINUED FROM PAGE 01)

NOTE: THE THICKNESS OF THIS MATERIAL EXCEEDS THE NORMAL MAXIMUM OF 4,000". ACCORDINGLY, THE STRENGTH AND OTHER CHARACTERISTICS OF THIS MATERIAL CAN BE EXPECTED TO BE SIGNIFICANTLY DIFFERENT FROM PLATE WHICH IS 4,000" OR LESS IN THICKNESS. THEREFORE, THIS MATERIAL SHOULD NOT BE USED IN APPLICATIONS WHICH REQUIRE CHARACTERISTICS EXPECTED WITHIN THE NORMAL THICKNESS RANGE. REYNOLDS METALS COMPANY URGES THAT CONTROLS BE ESTABLISHED TO PREVENT MISAPPLICATION UPON RESALE. FOR T7371 TEMPER NO GUARANTEE IS GIVEN FOR CORROSION RESISTANCE. CONTROLS SHOULD INCLUDE BUT NOT BE LIMITED TO FURNISHING MATERIAL CERTIFICATIONS TO THE END USER.

5000# MAX SWG.

118459

I document certifies that the material described above has been inspected and tested in accordance with (i) Seller's standard sampling and testing procedures or (ii) the requirements of any specifications of the material described above. The chemical composition limits and the applicable mechanical property test results of samples representative of the material are set forth above. Any attachments hereto. Samples of the material have been found to meet the specifications described above. Inspection and test records are maintained on file.

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REYNOLDS METALS COMPANY

EXECUTIVE OFFICES, Richmond, Virginia 23261

Certificate of Inspection and Test Results

YOUR ORDER NUMBER		SHIPPING POINT	DATE	PAGE 3 OF	
REYNOLDS NUMBER		MCCOOK SHEET AND PLATE PLANT	3/31/98		
57F6461	21389	REYNOLDS CODES	VALLEY NO. AND OR B/L NO. CERTIFICATE NO.		
		M 0739001015 81 F 9 003 500	0311337		C263294
NAME AS PROVIDED ON ORDER FORM OR LETTER					
RENO, NV					
S	SH	CASES	GR. WEIGHT	NET WEIGHT	QUANTITY
S	SHIP	2	7340	6690	2
C	TO				
0	0				
1	0				
0	0				

CHEMICAL COMPOSITION LIMITS FOR ALLOY 7075

Cu	Al	Fe	Mg	Mn	Si	Ti	Zn	AL	OTHER
1.8	1.20		2.10			3.10			
1.8	2.00	50	2.90	30	40	20	6.10	** EACH	TOTAL

** = REMAINDER

MECHANICAL PROPERTIES FOR TYPE RESULTS

IT NUMBER	TEST ITEM	OF	TEST TESTS	B18	ULTIMATE STRENGTH		YIELD STRENGTH		PERCENTAGE ELONGATION	
					ksi	MIN.	ksi	MIN.	ksi	MAX.
JOT113A 77351	2	LT	62.5	63.0	48.5	48.8	9.00	10.00		

I document certifies that the material described above has been inspected and tested in accordance with (i) Seller's standard sampling and testing procedures or (ii) the requirements of any specifications of the material described above. The chemical composition limits and the applicable mechanical property test results of samples representative of the material are set forth above in any attachments hereto. Samples of the material have been found to meet the specifications described above. Inspection and test records are maintained on file.

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SIGNED FOR REYNOLDS METALS COMPANY

REYNOLDS METALS COMPANY

EXECUTIVE OFFICES, Richmond, Virginia 23261

Certificate of Inspection and Test Results

YOUR ORDER NUMBER		SHIPPING POINT	DATE		
REYNOLDS NUMBER		MCCOOK SHEET AND PLATE PLANT	3/31/98	PAGE	4 OF
S7F6461 21583		REYNOLDS CODES	TALLY NO. AND ORIGIN BILL OF LADING NO. CERTIFICATE NO.		
		M 0729001016 31 F 9.005 502	9311359	C263294	
			CASES	GR. WEIGHT	NET WEIGHT
S O C P D T O			2	7060	6690
NAME AS SHIPPED TO UNLESS OTHERWISE INDICATED					

NAME AS SOON AS UNDERSIGNED OTHERS ARE INDICATED

MECHANICAL PROPERTIES FOR MISC RESULT

FRAG TURE

Amherst
10/10/11

document certifies that the material described above has been inspected and tested in accordance with (i) Seller's standard sampling and testing procedures or (ii) the requirements of any specifications of the material described above. The chemical composition limits and the applicable mechanical property test results of samples representative of the material are set forth above, any attachments hereto. Samples of the material have been found to meet the specifications described above. Inspection and test records are maintained on file. This certificate shall be subject to the general terms and conditions on the reverse side of Seller's Acknowledgment and Sales Order.

certificate shall be subject to the general terms and conditions on the reverse side of Seller's Acknowledgment and Sales Order.

SIGNED FOR REYNOLDS AIR COMPANY